

CLAIMS

1. A method for preparing pre-reacted synthetic batches, with a low content of carbon dioxide, for the production of glass formulas, comprising the steps of:

5 mixing raw materials, minerals, partially treated minerals or intermediate products therefrom, containing molecular systems of silica-sodium, silica-sodium-calcium, silica-sodium-magnesium, silica-calcium-magnesium, silica-sodium-calcium-magnesium and mixtures thereof, in selected stoichiometric amounts, which were selected from one or invariant points or from points on a
10 line connecting invariant points of phase diagrams;

 adding cullet to the batch of raw materials, in order to increase the velocity of the calcinations process, the decarbonization grade of the batch and the formation of the desired cristaline structures; and,

 calcining the batch to a reaction temperature which do not form a liquid
15 phase, wherein the CO₂ is liberated to produce said pre-reacted synthetic batch in order to completely saturate the sodium, sodium and calcium, or the sodium, calcium and magnesium of a molecular formula of glass.

2. The method as claimed in claim 1, wherein silica sand is added to the pre-reacted batch to complete the silica content of the glass formula:

20 3. The method as claimed in claim 1, wherein cullet between approximately 5 to 25% by weight is added to the mixture of raw materials, before the mixture being submitted to a calcination process.

4. The method as claimed in claim 1, wherein the mixture of raw materials is agglomerated with cullet before being submitted to calcination process.

5. The method as claimed in claim 1, wherein briquettes are formed with the mixture of raw materials and cullet before being submitted to calcination process.

6. The method as claimed in claim 1, wherein the content of carbon dioxide in the pre-reacted batches is between 1 and 0.5% by weight.

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